

ABSTRACT

Step air foil particularly for one-sided flotation of a running web, and web dryer incorporating the same. The air foil includes two discharge slots which allow for increased draw down force, which flattens machine direction wrinkles in a floating web. The air foil includes a primary discharge slot and a second discharge slot spaced from and stepped down from the primary discharge slot, a first web support surface between the primary discharge slot and the secondary discharge slot, and a second web support surface downstream of the secondary discharge slot in the direction of web travel. The air foil is in communication with an air supply which provides a supply of air that is uniformly distributed to the primary and secondary slots. Air discharged from the primary slot is gathered into the air stream of the secondary slot and creates an increased air cushion to provide greater support to the moving web and thereby remove machine direction web wrinkles caused by higher tension in light weight webs.